



OIPE

RAW SEQUENCE LISTING

DATE: 06/21/2002

PATENT APPLICATION: US/10/055,001A

TIME: 14:57:56

Input Set : A:\Sequence.txt

Output Set: N:\CRF3\06212002\J055001A.raw

```

6 <110> APPLICANT: Wesley, Susan V.
7      Waterhouse, Peter
8      Helliwell, Christopher A.
10 <120> TITLE OF INVENTION: Method and means for producing efficient silencing
constructs
11      using recombinational cloning
13 <130> FILE REFERENCE: HELLGA
C--> 15 <140> CURRENT APPLICATION NUMBER: US/10/055,001A
C--> 15 <141> CURRENT FILING DATE: 2002-06-11
15 <160> NUMBER OF SEQ ID NOS: 26
17 <170> SOFTWARE: PatentIn version 3.1
20 <210> SEQ ID NO: 1
21 <211> LENGTH: 25
22 <212> TYPE: DNA
23 <213> ORGANISM: Artificial sequence
25 <220> FEATURE:
26 <223> OTHER INFORMATION: core sequence of recombination site attB1
28 <400> SEQUENCE: 1
29 agcctgcttt tttgtacaaa cttgt                                25
32 <210> SEQ ID NO: 2
33 <211> LENGTH: 25
34 <212> TYPE: DNA
35 <213> ORGANISM: Artificial sequence
37 <220> FEATURE:
38 <223> OTHER INFORMATION: core sequence of recombination site attB2
40 <400> SEQUENCE: 2
41 agcctgcttt cttgtacaaa cttgt                                25
44 <210> SEQ ID NO: 3
45 <211> LENGTH: 25
46 <212> TYPE: DNA
47 <213> ORGANISM: Artificial sequence
49 <220> FEATURE:
50 <223> OTHER INFORMATION: core sequence of recombination site attB3
52 <400> SEQUENCE: 3
53 acccagcttt cttgtacaaa cttgt                                25
56 <210> SEQ ID NO: 4
57 <211> LENGTH: 25
58 <212> TYPE: DNA
59 <213> ORGANISM: Artificial sequence
61 <220> FEATURE:
62 <223> OTHER INFORMATION: core sequence of recombination site attR1
64 <400> SEQUENCE: 4
65 gttcagcttt tttgtacaaa cttgt                                25
68 <210> SEQ ID NO: 5

```

RAW SEQUENCE LISTING

DATE: 06/21/2002

PATENT APPLICATION: US/10/055,001A

TIME: 14:57:56

Input Set : A:\Sequence.txt

Output Set : N:\CRF3\06212002\J055001A.raw

```

69 <211> LENGTH: 25
70 <212> TYPE: DNA
71 <213> ORGANISM: Artificial sequence
73 <220> FEATURE:
74 <223> OTHER INFORMATION: core sequence of recombination site attr2
76 <400> SEQUENCE: 5
77 gttcagcttt cttgtacaaa cttgt                                25
80 <210> SEQ ID NO: 6
81 <211> LENGTH: 25
82 <212> TYPE: DNA
83 <213> ORGANISM: Artificial sequence
85 <220> FEATURE:
86 <223> OTHER INFORMATION: core sequence of recombination site attr3
88 <400> SEQUENCE: 6
89 gttcagcttt cttgtacaaa gttgg                                25
92 <210> SEQ ID NO: 7
93 <211> LENGTH: 25
94 <212> TYPE: DNA
95 <213> ORGANISM: Artificial sequence
97 <220> FEATURE:
98 <223> OTHER INFORMATION: core sequence of recombination site attL1
100 <400> SEQUENCE: 7
101 agcctgcttt tttgtacaaa gttgg                                25
104 <210> SEQ ID NO: 8
105 <211> LENGTH: 25
106 <212> TYPE: DNA
107 <213> ORGANISM: Artificial sequence
109 <220> FEATURE:
110 <223> OTHER INFORMATION: core sequence of recombination site attL2
112 <400> SEQUENCE: 8
113 agcctgcttt cttgtacaaa gttgg                                25
116 <210> SEQ ID NO: 9
117 <211> LENGTH: 25
118 <212> TYPE: DNA
119 <213> ORGANISM: Artificial sequence
121 <220> FEATURE:
122 <223> OTHER INFORMATION: core sequence of recombination site attL3
124 <400> SEQUENCE: 9
125 acccagcttt cttgtacaaa gttgg                                25
128 <210> SEQ ID NO: 10
129 <211> LENGTH: 25
130 <212> TYPE: DNA
131 <213> ORGANISM: Artificial sequence
133 <220> FEATURE:
134 <223> OTHER INFORMATION: core sequence of recombination site attP1
136 <400> SEQUENCE: 10
137 gttcagcttt tttgtacaaa gttgg                                25
140 <210> SEQ ID NO: 11
141 <211> LENGTH: 25

```

RAW SEQUENCE LISTING

DATE: 06/21/2002

PATENT APPLICATION: US/10/055,001A

TIME: 14:57:56

Input Set : A:\Sequence.txt

Output Set: N:\CRF3\06212002\J055001A.raw

```

142 <212> TYPE: DNA
143 <213> ORGANISM: Artificial sequence
145 <220> FEATURE:
146 <223> OTHER INFORMATION: core sequence of recombination site attP2,P3
148 <400> SEQUENCE: 11
149 gttcagcttt ctgtacaaa gttgg                                     25
152 <210> SEQ ID NO: 12
153 <211> LENGTH: 1188
154 <212> TYPE: DNA
155 <213> ORGANISM: Artificial sequence
157 <220> FEATURE:
158 <223> OTHER INFORMATION: cDNA sequence of the Arabidopsis thaliana chalcone synthase
codin
159      g region
161 <400> SEQUENCE: 12
162 atggtgatgg ctggtgcttc ttctttggat gagatcagac aggtcagag agctgatgga      60
163 cctgcaggca tcttggtat tggcactgct aacctgaga accatgtgct tcaggcggag      120
164 tctcctgact actacttcg catcaccaac agtgaacaca tgaccgacct caaggagaag      180
165 ttcaagcgca tgtgcgacaa gtcgacaatt cggaaacgtc acatgcatct gacggaggaa      240
166 ttcttcaagg aaaaccacac catgtgtgct tacatggctc cttctctgga caccagacag      300
167 gacatcgctg tggtcgaagt ccctaagcta ggcaaagaag cggcagtga ggccatcaag      360
168 gagtggggcc agcccaagtc aaagatcact catgtcgtct tctgcactac ctccggcgctc      420
169 gacatgectg gtgtgacta ccagctcacc aaagttcttg gtctccgtcc ttccgtcaag      480
170 cgtctcatga tgtaccagca aggttgcttc gccggcggta ctgtcctcgg tctcgtcaag      540
171 gatctgcgag agaacaaccg tggagcacgt gtctctgctg tctgctctga gatcacagcc      600
172 gttaccttcc gtggctccctc tgacaccac cttgactccc tegtccgtca ggctcttttc      660
173 agtgatggcg ccgcgcgact cattgtgggg tcggaccctg acacatctgt cggagagaaa      720
174 cccatctttg agatgggtgtc tgccgctcag accatccttc cagactctga tgggtgccata      780
175 gacggacatt tgagggaagt tggcttcacc ttccatctcc tcaaggatgt tcccggcctc      840
176 atctccaaga acattgtgaa gagtctagac gaagcgttta aacctttggg gataagtga      900
177 tggaaactccc tcttctggat agcccacct ggaggtccag cgatcctaga ccaggtggag      960
178 ataaagctag gactaaagga agagaagatg agggcgacac gtcacgtgtt gagcgagtat     1020
179 ggaacatgtg cgagcgcgtg cgttctcttc atactagacg agatgaggag gaagtcagct     1080
180 aaggatggtg tggccacgac aggagaaggg ttggagtggg gtgtcttgtt tggtttcgga     1140
181 ccaggtctca ctggtgagac agtcgtcttg cacagcgttc ctctctaa      1188
184 <210> SEQ ID NO: 13
185 <211> LENGTH: 18691
186 <212> TYPE: DNA
187 <213> ORGANISM: Artificial sequence
189 <220> FEATURE:
190 <223> OTHER INFORMATION: acceptor vector pHELLSGATE
192 <220> FEATURE:
193 <221> NAME/KEY: misc_feature
194 <222> LOCATION: (7922)..(9985)
195 <223> OTHER INFORMATION: spectinomycin resistance
197 <220> FEATURE:
198 <221> NAME/KEY: misc_feature
199 <222> LOCATION: (10706)..(11324)
200 <223> OTHER INFORMATION: right T-DNA border fragment
202 <220> FEATURE:

```

RAW SEQUENCE LISTING

DATE: 06/21/2002

PATENT APPLICATION: US/10/055,001A

TIME: 14:57:56

Input Set : A:\Sequence.txt

Output Set: N:\CRF3\06212002\J055001A.raw

203 <221> NAME/KEY: misc_feature
204 <222> LOCATION: (11674)..(13019)
205 <223> OTHER INFORMATION: CaMV35S promoter fragment
207 <220> FEATURE:
208 <221> NAME/KEY: misc_feature
209 <222> LOCATION: (17890)..(17659)
210 <223> OTHER INFORMATION: attP1 recombination site (complement)
212 <220> FEATURE:
213 <221> NAME/KEY: misc_feature
214 <222> LOCATION: (17610)..(16855)
215 <223> OTHER INFORMATION: ccdB selection marker (complement)
217 <220> FEATURE:
218 <221> NAME/KEY: misc_feature
219 <222> LOCATION: (16551)..(16319)
220 <223> OTHER INFORMATION: attP2 recombination site (complement)
222 <220> FEATURE:
223 <221> NAME/KEY: misc_feature
224 <222> LOCATION: (14660)..(16258)
225 <223> OTHER INFORMATION: pdk2 intron 2
227 <220> FEATURE:
228 <221> NAME/KEY: misc_feature
229 <222> LOCATION: (15002)..(15661)
230 <223> OTHER INFORMATION: chloramphenicol resistance gene
232 <220> FEATURE:
233 <221> NAME/KEY: misc_feature
234 <222> LOCATION: (14387)..(14619)
235 <223> OTHER INFORMATION: attP2 recombination site
237 <220> FEATURE:
238 <221> NAME/KEY: misc_feature
239 <222> LOCATION: (13675)..(13980)
240 <223> OTHER INFORMATION: ccdB selection marker (complement)
242 <220> FEATURE:
243 <221> NAME/KEY: misc_feature
244 <222> LOCATION: (13048)..(13279)
245 <223> OTHER INFORMATION: attP1 recombination site
247 <220> FEATURE:
248 <221> NAME/KEY: misc_feature
249 <222> LOCATION: (17922)..(18687)
250 <223> OTHER INFORMATION: octopine synthase gene terminator region
252 <220> FEATURE:
253 <221> NAME/KEY: misc_feature
254 <222> LOCATION: (264)..(496)
255 <223> OTHER INFORMATION: nopaline synthase gene promoter
257 <220> FEATURE:
258 <221> NAME/KEY: misc_feature
259 <222> LOCATION: (497)..(1442)
260 <223> OTHER INFORMATION: nptII coding region
262 <220> FEATURE:
263 <221> NAME/KEY: misc_feature

RAW SEQUENCE LISTING

DATE: 06/21/2002

PATENT APPLICATION: US/10/055,001A

TIME: 14:57:56

Input Set : A:\Sequence.txt

Output Set: N:\CRF3\06212002\J055001A.raw

```

264 <222> LOCATION (1443)..(2148)
265 <223> OTHER INFORMATION: nopaline synthase gene terminator
267 <220> FEATURE:
268 <221> NAME/KEY: misc_feature
269 <222> LOCATION: (2149)..(2706)
270 <223> OTHER INFORMATION: a left T-DNA border region
272 <400> SEQUENCE: 13
273 ggcgcacta gtgatatccc ggggccatgg cggccgggag catgcgacgt cgggcccacat 60
274 tcgcctata gtgagtcgta ttacaattca ctggccgtcg ttttacaacg tcgtgactgg 120
275 gaaaacctg gcgttaccga acttaatcgc ctggcagcac atcccccttt cgcagctgg 180
276 cgtaatagcg aagaggcccg caccgatcgc ctttcccaac agttgcgcag cctgaatggc 240
277 gaatggaaat tgtaaacggt aatgggtttc tggagtttaa tgagctaagc acatacgtca 300
278 gaaaccatta ttgcgcgttc aaaagtcgcc taaggtcact atcagctagc aaatatttct 360
279 tgtcaaaaat gctccactga cgttccataa attccccctg gtatccaatt agagtctcat 420
280 attcactctc aatccaaata atctgcaatg gcaattacct tatecgcaac ttctttacct 480
281 atttcgcgcc ggatccgggc aggttctccg gccgcttggg tggagaggct attcggctat 540
282 gactgggcac aacagacaat cggtctctct gatgcgcgcg tgttcgggt gtcagcgcag 600
283 gggcgcccg ttctttttgt caagaccgac ctgtccgggt cctgaatga actgcaggac 660
284 gaggcagcgc ggtatcgtg gctggccacg acgggcgttc cttgcgcagc tgtgctcgac 720
285 gttgtcactg aagcgggaag ggactggtg ctattgggcg aagtgcgcgg gcaggatctc 780
286 ctgtcatctc accttgctcc tgcgagaaa gtatccatca tggctgatgc aatgcgcgcg 840
287 ctgcatacgc ttgatccggc tacctgccc aaccgaccac aagcgaaaca tcgcatcgag 900
288 cgagcacgta ctcgatgga agcgggtctt gtgatcagg atgatctgga cgaagagcat 960
289 caggggctcg cgcagccga actgttcgcc aggtcgaagg cgcgcagtc cgcagcgcag 1020
290 gatctcgtcg tgacccatgg cgtatgcctg ttgccgaata tcatggtgga aaatggccgc 1080
291 tttcttggtt tcatcgactg tggccggctg ggtgtggcgg accgctatca ggacatagcg 1140
292 ttggctaccc gtgatatctg tgaagagctt ggcggcgaat gggctgaccg cttcctcgtg 1200
293 ctttacggtg tcgcgcgtcc cgtatcgag cgcacgcct tctatgcct tcttgacgag 1260
294 ttctcttgag cgggactctg ggggttcgaaa tgaccgacca agcgacgcc aacctgccat 1320
295 cacgagatct cgtatccacc gccgccttct atgaaagggt gggcttcgga atcgtttcc 1380
296 gggacgcgcg ctggatgatc ctccagcgcg gggatctcat gctggagttc ttcgcccacc 1440
297 ccgatccaac acttacgttt gcaacgtcca agagcaaata gaccacgaac gccggaaggt 1500
298 tgccgcagcg tgtggattgc gtctcaattc tctcttgag gaatgcaatg atgaatatga 1560
299 tactgactat gaaactttga gggataactg cctagcaccg tcacctcata acgtgcacga 1620
300 tgcattgcct gacaacatgg aacatcgcta ttttctgaa gaattatgct cgttggagga 1680
301 tgtcgcggca attgcagcta ttgccaacat cgaactaccc ctacgcagc cattcatcaa 1740
302 tattattcat gcggggaaag gcaagattaa tccaactggc aaatcatcca gcgtgattgg 1800
303 taacttcagt tccagcgact tgattcggtt tgggtgctacc cactgtttca ataaggacga 1860
304 gatggtggag taaagaagga gtgcgtcgaa gcagatcggt caaacatttg gcaataaagt 1920
305 ttcttaagat tgaatcctgt tgccggtctt gcgatgatta tcatataatt tctgttgaat 1980
306 tacgttaagc atgtaataat taacatgtaa tgcatgacgt tatttatgag atgggttttt 2040
307 atgattagag tcccgcaatt atacatttaa tacgcgatag aaaacaaaat atagcgcgca 2100
308 aactaggata aattatcgcg cgcgggtgtc tctatgttac tagatcgaat taattccagg 2160
309 cgggtgaagg caatcagctg ttgccgctct cactggtgaa aagaaaaacc accccagtac 2220
310 attaaaaacg tccgcaatgt gttattaagt tgtctaagcg tcaatttgtt tacaccacaa 2280
311 tatatcctgc caccagccag ccaacagctc cccgaccggc agctcggcac aaaatcacca 2340
312 ctogatacag gcagcccatc agtcggggac ggcgtcagcg ggagagccgt tgtaaggcgg 2400
313 cagactttgc tcatgttacc gatgctattc ggaagaacgg caactaagct gccgggtttg 2460
314 aaacacggat gatctcgcgg agggtagcat gttgattgta acgatgacag agcgttgctg 2520

```

VERIFICATION SUMMARY

PATENT APPLICATION: US/10/055,001A

DATE: 06/21/2002

TIME: 14:57:57

Input Set : A:\Sequence.txt

Output Set: N:\CRF3\06212002\J055001A.raw

L 15 M 270 C: Current Application Number differs, Replaced Current Application No

L 15 M 271 C: Current Filing Date differs, Replaced Current Filing Date